CLAIMS

What is claimed is:

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1.	A	${\tt method}$	in	а	COT	nmunicat	ion	network	f	or	processing
COM	mur	nication	n fi	rom	а	general	pro	ocessor	to	a	network
pro	ces	sor, s	aid	me	the	od compr	isi	ng:			

encapsulating an informational frame into an encapsulated packet for transmission from a general processor to a network processor having a data processor and a control processor; and

in response to the informational frame being a control frame and the control processor being congested, designating the encapsulated packet as a data-type packet for processing by the data processor.

1	2. The method according to Claim 1, further comprising:
2	sending the encapsulated packet from the general
3	processor to the network processor.
1	3. The method according to Claim 2, further comprising:
2	decapsulating, by the data processor, the
3	encapsulated packet and parsing the control frame; and
4	processing, by the data processor, the control frame.
1	4. The method according to Claim 3, wherein processing,
2	by the data processor, the control frame further
3	comprises:
4	directing and executing, by the data processor, a
5	control command defined within the control frame to a
6	target control processor of a target network processor
7	designated within the encapsulated packet.
1	5. The method according to Claim 1, further comprising:
2	in response to the informational frame being a
3	control frame and the control processor being available
4	for processing the control frame, designating the
5	encapsulated packet as a control-type packet for
6	processing by the control processor;
7	in response to the informational frame being a data
8	frame, designating the encapsulated packet as a data-type
9	packet for processing by the data processor; and
10	in response to the informational frame being a data

ar	nd con	trol	frame,	desi	gnating	the	enc	apsı	ılated	packet	as
a	data-	type	packet	for	process	sing	by	the	data	processo	or.

6. The method according to Claim 1, wherein the
encapsulated packet further comprises a destination
address field, a source address field, an informational
type field, a control- point type field, a target
processor field, and the informational frame.

7.	A	method	within	a	commun	ication	net	work	for	processing
com	mur	nicatio	n from a	a 🤉	general	process	sor	to a	net	work
pro	ces	sor, s	aid met	ho	d compr	ising:				

receiving and decapsulating, by a network processor having a data processor and a control processor, an encapsulated packet into an informational frame; and

in response to the encapsulated packet being designated as a data-type packet and the informational frame being a control frame, processing the control frame by the data processor.

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1	8. The method according to Claim 7, wherein receiving
2	and decapsulating an encapsulated packet further
3	comprising:

parsing, by the data processor, the control frame from the encapsulated packet.

9. The method according to Claim 7, wherein processing the control frame by the data processor further comprises:

directing and executing, by the data processor, a control command defined within the control frame to a target control processor of a target network processor designated within the encapsulated packet.

10. The method according to Claim 7, further comprising:

in response to the encapsulated packet being designated a control-type packet and the informational frame being the control frame, processing the control frame by the control processor;

in response to the encapsulated packet being designated a data-type packet and the informational frame being a data frame, processing the data frame by the data processor; and

in response to the encapsulated packet being designated a data-type packet and the informational frame being a data and control frame, processing the data and control frame by the data processor.

11. A system for processing network communication, comprising:

a general processor that encapsulates an informational frame into an encapsulated packet for transmission within a communication network from the general processor to a network processor having a data processor and a control processor wherein said general processor responsive to the informational frame being a control frame and the control processor being congested designates the encapsulated packet as a data-type packet for processing by the data processor.

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12. The system according to Claim 11, further comprising:

a network processor coupled to the general processor wherein the network processor comprises a data processor and a control processor; and

wherein the general processor sends the encapsulated packet to the network processor.

13. The system according to Claim 12, wherein:

the network processor further comprises at least one frame processing unit that receives and decapsulates from the general processor the encapsulated packet and that parses the control frame from the encapsulated packet; and

the data processor processes the control frame.

- 14. The system according to Claim 13, wherein the data processor directs and executes a control command defined within the control frame to a target control processor of a target network processor designated within the encapsulated packet.
- 15. The system according to Claim 11, wherein the general processor further comprises at least one frame processing unit that encapsulates the informational frame into the encapsulated packet and sends the encapsulated packet from the general processor to the network processor.

16. A network processor, comprising:

a data processor; and

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a control processor, wherein the network processor receives and decapsulates an encapsulated packet, that has been transmitted within a communication network from a general processor, into an informational frame and wherein the data processor, responsive to the encapsulated packet being designated as a data-type packet and the informational frame being a control frame, processes the control frame.

1	17. The network processor according to Claim 16, wherein
2	the data processor parses the control frame from the
1	encapsulated packet.

- 18. The network processor according to Claim 16, wherein the data processor directs and executes a control command defined within the control frame to a target control processor of a target network processor designated within the encapsulated packet.
- 19. The network processor according to Claim 16, further comprising:

at least one frame processing unit that receives and decapsulates from the general processor the encapsulated packet and that parses the control frame from the encapsulated packet.

20. A program product for processing network communication from a general processor to a network processor, said program product comprising:

a control program that instructs a general processor to encapsulate an informational frame into an encapsulated packet for transmission within a communication network from the general processor to a network processor having a data processor and a control processor and to designate a packet type for the encapsulated packet, wherein responsive to the informational frame being a control frame and the control processor being congested for processing the control frame, said control program instructs the general processor to designate the encapsulated packet as a data-type packet for processing by the data processor; and

computer usable media bearing said control program.

21.	The	program	${\tt product}$	according	to	Claim	20,	further
compri	sing	j :						

said control program instructs the general processor to send the encapsulated packet to the network processor.

22. The program product according to Claim 21, wherein the program product further has another control program:

said another control program instructs the data processor to decapsulate the encapsulated packet and parse the control frame from the encapsulated packet; and

said another control program instructs the data processor to process the control frame.

23. The program product according to Claim 22, wherein:

said another control program instructs the data processor to direct and execute a control command defined within the control frame to a target control processor of a target network processor designated within the encapsulated packet.

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24. A program product for processing network communication from a general processor to a network processor, said program product comprising:

a control program that instructs a network processor having a data processor and a control processor to receive and decapsulate an encapsulated packet, that has been transmitted within a communication network from a general processor, into an informational frame, wherein responsive to the encapsulated packet being designated as a data-type packet and the informational frame being a control frame, said control program instructs the data processor to process the control frame; and

computer usable media bearing said control program...

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- 25. The program product according to Claim 24, wherein said control program instructs the data processor to parse the control frame from the encapsulated packet.
- 26. The program product according to Claim 24, wherein:

said control program instructs the data processor to direct and execute a control command defined within the control frame to a target control processor of a target network processor designated within the encapsulated packet.

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27. A data structure for network communication within a communication network including a general processor and a network processor having a data processor and a control processor, said data structure comprising:

an encapsulated packet which includes at least a destination address field, a source address field, an informational type field, a control-point type field, a target processor field, and an informational frame, wherein the encapsulated packet is transmitted from the general processor to the network processor, and wherein the informational type field indicates a data-type setting if the encapsulated packet is a data-type packet and the control- point type field indicates a control-type setting to designate the informational frame for processing by the data processor.